

### Abstract of the Disclosure

The present invention relates to a method and system for implementing link level protocol redundancy in a router. In particular, the invention relates to providing  
5 redundancy of the Open Shortest Path First (OSPF) routing protocol. An active processor provides OSPF operations. In the present invention, a standby processor is coupled to the active processor. During an initial synchronization, all network link protocol information from the active processor is forwarded to the standby processor. The network link  
10 information can include OSPF state information, OSPF configuration information, OSPF adjacencies information, OSPF interface information and OSPF global protocol information. Thereafter, any updates of network link protocol information are immediately forwarded to the standby processor. Upon failure of the active processor, the router is switched to the standby processor and all OSPF protocol operations are performed on the standby processor. In the present invention, all states of the link  
15 protocol immediately function as if a failure had not occurred.